2008 Engineering Conference Breakout Sessions

1. MicroStation V8 XM Tips and Tricks
Track: Design
Presenters: Richard Morrow
Synopsis: Review tips and tricks of the latest release of MicroStation. Learn about features you may not be aware of that can increase your functionality and productivity
Time Required: 50 Minutes

2. ProjectWise for Roadway Design
Track: Design
Presenters: Richard Morrow
Synopsis: Review how to use ProjectWise and InRoads together. Work with your design information in a managed environment, including managed workspaces. Lecture training will be provided using UDOT's ProjectWise and InRoads environments.
Time Required: 50 Minutes

3. InRoads
Track: Design
Presenters: Richard Morrow
Synopsis: This presentation provides a brief overview of the enhancements that are included in InRoads XM Edition, Service Pack 2. It includes enhancements such as installation on a 64-BIT operating system, new tools like the Table Editors for Horizontal and Vertical Geometries, and a brief demonstration of Bentley's Civil Roundabout Tool.
Time Required: 90 Minutes

4. Where are we going with GIS?
Track: Design
Presenters: Remmet DeGroot, Craig Hancock (back-up)
Synopsis: A strategic plan has been created as well as a GIS Committee. The future plans of GIS will be discussed in this meeting
Time Required: 50 Minutes

5. Visualization for use in Design, with Public Involvement in mind
Track: Design
Presenters: Paul Wheeler
Synopsis: This session will take a look at the benefits and uses of visualization for planning, public involvement, design, construction and other areas. This session will also look at where visualization will be going in the future focusing on augmented reality, visual simulators, structured public involvement, and 3D Design.
Time Required: 50 Minutes

6. Legal Issues in Engineering Part II
Track: Design
Presenters: Patrick Cowley, AGC
Synopsis: Updated presentation from last year and an overview of the updated design exception/wavier process.
Time Required: 50 Minutes

7. "What happens after you deliver a project for advertisement?"
Track: Design
Presenters: Marjorie Sanchez
Synopsis: The importance of the advertising checklist and tips for a successful advertisement.
Time Required: 50 Minutes

8. Utilizing Expressways in Urban Corridors
Track: Design
Presenters: Doug Graham
Synopsis: Horrocks along with other consultant groups will be discussing the current planning and design trends and lessons learned in expressways in urban areas. Topics include:

- Grade-Separated Interchanges
- Standards
- Access Management
- Traffic Operations
- Geometric Design
- Trails
- Utilities
- Lighting and aesthetics

Highlighted projects for discussion include:

- Southern Parkway
- SR-18
- SR-92
- Legacy Parkway

Time Required: 50 Minutes

9. Digital Aerial Camera Applications for Roadway Mapping
Track: Design
Presenters: Casey Francis, Seth Tait
Synopsis: Digital camera technology offers many benefits over traditional film-based systems. These include an end-to-end digital workflow resulting in quicker mapping schedules, multispectral imagery, improved image quality and reduced ground control requirements. The session will also describe the peripheral equipment used in tandem with the digital camera and the technology behind it.
Time Required: 50 Minutes

10. Specification School
Track: Design
Presenters: Patti Charles, Barry Axelrod, George Lukes
Synopsis: Overview of 2008 Specifications. Review of differences between standard specifications, supplemental specifications, and special provisions (Department Specials, Materials Specials, Etc). Review of Specification writer's guide. Understanding the impact of special provisions on the table of contents.
Time Required: 50 Minutes

11. UTA FrontLines 2015 Progress
Track: Design
Primary Presenters: Steve Meyer, Ralph Jackson,
Back-up Presenters: Dave Goeres, Greg Thorpe
Synopsis: The Frontlines 2015 project is comprised of FrontRunner South (commuter rail from Provo to Salt Lake), and the Mid-Jordan, West Valley, Draper, and Airport light rail lines. The project represents a major commitment to a regional mass-transit system to add "70 miles of rail in 7 years." This presentation will offer the progress towards this ambitious goal; maintaining consistency across types of modes and lines; and innovative means to remain within budget and schedule.
Time Required: 50 Minutes

12. Construction Engineering Management (CEM) Session. (Replaces November Webinar)
Track: Construction
Presenters: Greg Searle, Mike Garcia (UDOT Construction)
Synopsis: To be certified with UDOT to manage and document UDOT and Local Government projects, construction personnel must be certified in CEM. This training replaces one of the mandatory webinars.
Time Required: 90 minutes

13. Civil Rights Electronic Certified Payroll
Track: Construction
Presenters: Denice Graham
Synopsis: The Civil Rights Office will showcase the Electronic Certified Payroll Program. A demonstration of the time saving features will be presented for Contractors, Consultants, and internal UDOT personnel. See how to create reports that can be generated and used as management tools to save time and track hours, apprentices, etc. electronically versus manually.
Time Required: 90 Minutes

14. Cold Inplace Recycle using Engineered Emulsion, placed at night.
Track: Construction
Presenters: Lief Condie (Resident Engineer UDOT), Cameron Ryan (SEM Materials)
Synopsis: The I-15, MP 6-10 project incorporated 3" of cold inplace recycle prior to placement of HMA and SMA paving. Due to traffic impacts, delays and hot weather, project specifications required the completion of cold recycle during nighttime operations. Lessons learned regarding placement requirements and challenges, quality control, and traffic use of cold recycled pavement will be discussed.
Time Required: 50 Minutes

15. Partnering Training for Success
Track: Construction
Presenters: Kris Peterson (TBA), Renee Hoekstra
Synopsis: UDOT requires that all projects be partnered. Partnering is one of the construction activities that are measured and reported on the RPDU dashboard. Partnering has been instrumental in solving problems at the project level and has reduced claims and disputes. This training will provide examples of successes in the partnering arena
Time Required: 50 Minutes

16. AGC/UDOT Panel Discussion
Track: Construction
Presenters: Kris Peterson, AGC Members
Synopsis: Hot topics of interest to both the Engineering and Contracting community will be addressed and discussed by the panel of UDOT officials and AGC members. This discussion has gotten lively at times in the past. Plan to attend!!!
Time Required: 90 Minutes

17. Minimal Delays and Closures with Accelerated Bridge Construction (ABC)
Track: Construction
Presenters: Richard Miller (Presentation Team TBA)
Synopsis: Utah is now the national leader in replacing bridges with minimal traffic delays or lane closures. Lessons learned on projects such as I-80 CMGC reconstruction and ***"Bridge Farm"*** , I-80 Lambs Canyon Mountain Dell Bridge Replacements, US-6 MP 200 bridge replacement with Precast Wingwalls and Deck Panels will be discussed.
Time Required: 90 minutes

18. State Environmental Process & Environmental Manual of Instruction
Track: Environmental
Presenters: Jerry Chaney
Synopsis: The new Environmental Manual of Instruction should be close to completion by December 2008. This session will describe the contents of the manual, explain how it is organized, how it can be obtained. This breakout session will also describe the Department's new environmental Policy for state projects. This Policy describes the environmental process for projects with no federal funding or federal action required.
Time Required: 50 minutes

19. Environmental Mitigation and Project Commitment Tracking
Track: Environmental, Project Management, Design
Presenters: Rebecka Stromness
Synopsis: The new Environmental Management System (EMS) is a system to log and track environmental mitigation and project commitments. This is an ePM based system which is intended to be used by Project Managers, Environmental Staff, Designers, Right of Way Staff, Public Involvement Coordinators, and Consultants as a central depository of any commitments made on a project. This central location of commitments will enable a project team to make sure all commitments are documented and implemented. Come see a demo on how the EMS system works.
Time Required: 50 Minutes

20. 4(f) Training
Track: Environmental
Presenters: Betsy Skinner
Synopsis: New regulations for Section 4(f) went into effect on April 11, 2008. This presentation discusses the major changes and provides guidance on how to complete a Section 4(f) evaluation.
Time Required: 50 Minutes

21. Basics of Historic Architectural components of 106
Track: Environmental, Project Management
Presenters: Elizabeth Giraud, Nelson Knight
Synopsis: Covers the basics of historic preservation beyond the requirements of section 106. Intent of session is to help consultants, UDOT environmental staff, project managers and public involvement managers make decisions regarding mitigation solutions and address the topic in public meetings. Session will cover the National Register, preservation incentives such as tax credits, and how communities use historic preservation as a planning tool.
Time Required: 50 Minutes

22. Wetland Training
Track: Environmental
Presenters: Todd, Sherman, Brian Nicholson, Christine Whittaker
Synopsis: This session will compare various functional assessment methods that have been applied on recent UDOT projects, and will provide some lessons learned and a comparison of some. Various project team members will provide information of methods used on their projects, what they learned, and how you can be better prepared for your next wetland delineation and/or functional assessment.
Time Required: 50 Minutes

23. Reoccurring Issues in Environmental Documents: How to Avoid and Deal with Them
Track: Environmental, Project Management
Presenters: Kevin Kilpatrick, Rebecka Stromness, Joe Kammerer, Reed Soper
Synopsis: This session will discuss the top issues reoccurring in the environmental process and documents and ways to avoid them or deal with them. The session will also provide examples of ways to improve document quality and streamline coordination on large documents. Additionally, the session will detail some lessons learned from past projects, issues to be aware of and possibly some to avoid.
Time Required: 90 Minutes

24. The Erodibility Index Method for Estimating Pier Scour on the US-191; Over Colorado River Bridge project.
Track: Hydraulics
Primary Presenters: Jeff Sims, P.E. - H.W. Lochner, Senior Drainage Engineer
Denis Stuhff, P.E. - UDOT Central Hydraulics
Synopsis: Learn about estimating pier scour in rock using the Erodibility Index Method. This approach evaluates the erodibility threshold of materials from cohesive to cohesionless and from silt to rock. By making a comparison of this with the stream power, you can develop a more applicable estimate of potential scour depth in rock than with the traditional HEC-18 methodology. This presentation will focus on the use of this method for the US-191; Over Colorado River Bridge project near Moab, Utah.
Time required: 50 Minutes

25. Wildlife Movement and Utah Roads
Track: Research/Hydraulics
Primary Presenters: Patricia Cramer
Backup Presenters (if any): John Bissonette
Synopsis: Utah DOT has sponsored a research project in conjunction with Utah State University to look at wildlife movement near roads. Dr. Cramer has placed dozens of cameras along US 6, I-70, and I-15, as well as other roads to examine wildlife use of areas along roads, their approaches to existing wildlife crossings, bridges and culverts, and their use of wildlife crossings as they are built. This talk will review the status of this three year project with respect to what we are learning about deer, elk, and other wildlife movements along, over, and under roads. The objective of this project is to better understand what types of crossings mule deer and elk will use, so we can better design cost-effective structures that the majority of the animals will use.
Time required: 50 minutes

26. Enhancing the Impact Assessment Toolkit
Track: Research
Primary Presenters: Dr. Thomas Twedt and Mike Sipos, BIO-WEST, Inc.
Synopsis: New “tools” or techniques / approaches to assessing impacts from transportation projects are under development continuously as the environmental process evolves and responds to changing needs. This session reports on the basis, approach, and current status of several such tools under development by UDOT to address the extent of some challenging, ecologically-based impacts. The first is an approach to developing a methodology for assessing the indirect impacts of noise on adjacent avian (bird) species by highway projects, and is the result of commitments made as a part of the Legacy Parkway environmental process. The second is the development of a Habitat Quality Index, a UDOT Research Division project also initiated as the result of Legacy-identified needs, which will quantitatively value existing habitat to allow comparisons of alternatives, estimates of losses, and evaluations of mitigate success from projects in a very quick and simple manner.
Both approaches have the support of a variety of resource agencies, who are actively involved in their development; and the overall objective is to develop the methods for general UDOT and other agency use in Utah and elsewhere.
Time required: 50 Minutes

27. The Challenges of Embankments on Soft Soils
Track: Research and Geotech
Primary Presenters: Dr. Steven Bartlett and Dr. Evert Lawton; University of Utah
Synopsis: Many of our large highway embankments are situated on very soft, compressible soils. Through research efforts and monitoring of our embankments, we have learned many important lessons over the past 10 years about the behavior of these embankments. This session will discuss these lessons, and provide insights into proper design techniques, monitoring during construction, the use of innovative materials and procedures (like geofoam, prefabricated vertical drains, etc.), and other pertinent information. This will be pertinent to design engineers, construction engineers, and other members of the project team.
Time required: 90 minutes

28. GFRP reinforcing bars, opposite from the steel bars
Track: Research, Structures, Construction, Material
Primary Presenters: Richard Miller, Colby Christensen, Hughes Brothers
Backup Presenters (if any): Daniel Hsiao
Synopsis: Glass Fiber Reinforced Polymer (GFRP) rebar could be a good alternative to the tradition concrete reinforcing steel. GFRP is free from chlorine corrosion. AASHTO has adopted the GFRP design specs this year (2008). It is a major step to allow widely use of GFRP on highway bridge decks.
At this session, you will learn: 1. "What is GFRP" from one of the suppliers? 2. What studies have been done in GFRP nationally? 3. What is UDOT's view and decision on GFRP?
Time required: 50 minutes

29. Segmental Design and Construction of the New US-191 Over Colorado River Bridge in Moab, Utah
Track: Structures
Primary Presenters: Stephen E. Fultz, PE, SE – FIGG Bridge Engineers, Kirk R. Thornock, PE – UDOT Region 4, Daniel Page, PE – UDOT Structures
Backup Presenters (if any): Russell D. Call, PE, SE – FIGG Bridge Engineers, Richard Miller, PE – UDOT Structures
Synopsis: World renowned Moab Utah is the gateway to Arches National Park, Canyonlands National Park, Dead Horse State Park, and the Sand Flats Recreation Area. US-191 connects Southeastern Utah and provides the main access through this pristine area. UDOT is replacing the functionally obsolete US-191 Bridge over the Colorado River just north of Moab near the entrance to Arches. Minimizing construction and long term impacts to this unique environment, traffic, and heavy recreational use are key components of the successful bridge solution. With this goal, and in step with UDOT's accelerated bridge construction focus, the solution is a post-tensioned three-span cast-in-place concrete segmental bridge with only one pier in the river. Twin structures will be built from above to minimize impacts to the river and sensitive environmental / recreational areas below. A specialized FIGG Bridge Design Charette™ enhanced the Public Involvement process and facilitated development and determination of aesthetic treatments and features in line with the community's vision. Final design will be complete by the end of 2008, with construction anticipated to begin in early 2009.
Time required: 50 minutes

30. Methods for estimating magnitude and frequency of peak flows for natural streams in Utah: Obtaining the elusive "Q"
Track: Research
Primary Presenters: Terry Kenney of USGS
Synopsis: Throughout most of Utah stream flow statistics are only available for gauged locations. Currently, those interested in acquiring these types of stream flow statistics for ungauged streams must conduct their own analyses. Comprehensive data acquisition, selection and proper employment of statistical techniques and quantitative evaluation of final results are critical components in these analyses. This is a web-based application for evaluating stream flow statistics for various users, including planners, roadway designers, and other users. This is a comprehensive geographic information system (GIS), complete with developed and evaluated stream flow statistical models, for those in need of flow statistics, acquire data from different sources, use an assortment of evaluation techniques, and generate results of varying confidence.
Time required: 50 Minutes

31. Choosing the Right Traffic Analysis Tool for the Job
Track: ITS / Traffic Management / Safety
Presenters: Lynn Jacobs, Eric Rasband
Synopsis: There are many tools and software packages that are currently available for use in performing traffic analyses. The purpose of this session is to describe the characteristics of each tool. This description will include examples of situations where each tool is and is not applicable. This information will be helpful to those who are planning, scoping, managing and reviewing projects that involve traffic analysis.
Time Required: 50 minutes

32. PeMS in Action (Performance Monitoring System)
Track: ITS / Traffic Management / Safety
Presenters: Glenn Blackwelder
Synopsis: A hands-on look at how anyone can access the Traffic Operations Center's archived traffic volumes, speeds and occupancies. The new Performance Measurement System (PeMS) allows users to access the TOC's data via the web in a wide variety of formats. We will demonstrate the several uses of PeMS and then provide an interactive session where we demonstrate what PeMS can do based on questions from the audience.
Time Required: 50 minutes

33. Crashes in Vicinity of Major Crossroads
Track: ITS / Traffic Management / Safety
Presenters: Grant G. Schultz, Ph.D., P.E., PTOE; Charles Allen, EIT
Synopsis: The American Association of State Highway and Transportation Officials (AASHTO) *A Policy on Geometric Design of Highways and Streets* (AASHTO Green Book) states that "…driveways should not be located within the functional area of an intersection or in the influence area of an adjacent driveway. The functional area extends both upstream and downstream from the physical intersection area and includes the longitudinal limits of auxiliary lanes. The influence area associated with a driveway includes (1) the impact length (the distance back from a driveway that cars begin to be affected), (2) the perception-reaction distance, and (3) the car length" (p. 729). Past research has explored the effect of crossroads in the vicinity of interchanges and the impact that these crossroads have on capacity and safety. Past research has not, however, extended this impact to include major intersections or crossroads along arterial streets. The purpose of this research is to answer the questions associated with the impact of accesses in the vicinity of major arterial crossroads by examining midblock crashes and their proximity to such crossroads. Some of the questions to answer include: What percent of the crashes occur within the functional area? What is the severity of crashes as a function of their proximity to major crossroads? What are the advantages of designing intersections with access points well beyond the functional area and the major crossroad? These and other questions need to be answered as a function of driveway density and conflict points and presented in this session.
Time Required: 50 minutes

34. Express Lanes Update
Track: ITS / Traffic Management / Safety
Presenters: Catherine Cutler
Synopsis: Electronic Toll Collection (ETC) is the future for the Express Lanes on I-15. What will this mean for the current free users (carpoolers, bus riders, motorcycle operators, and "Clean Fuel" plate vehicles) of the Express Lanes? How will the dynamic pricing algorithm work? What is "zone tolling"? and more. Come and learn about what we're currently doing, what other states have already done, and where we're going in the near future with this new congestion management tool.
Time Required: 50 minutes

35. Meteorology for ~~Dummies~~ Transportation Engineers
Track: ITS / Traffic Management / Safety
Presenters: Ralph Patterson
Synopsis: This program is intended to introduce and/or broaden the engineers' scope and understanding of the broad spectrum of the Surface Transportation community's meteorological needs.
Topics will include: user needs, how to get the most out of your TOC meteorologist staff, accessing and understanding Road Weather Information Systems (RWIS), and basically interpreting the myriad of weather information available.

Some of the concepts that we hope participants will develop a better appreciation for are:

- Weather sensitivities and strategies for transportation operations.
- Every day use of RWIS and forecast information
- Methodologies involved in operational forecasting
- Basic understanding of how to utilize model data, radar and satellite imagery

Time Required: 50 minutes

36. Rural Road Safety Improvements and Corridor Safety Assessments (CSAs)
Track: ITS / Traffic Management / Safety
Presenters: Kaz, Mack Christensen, Brian Christensen
Synopsis: FHWA has initiated a program to improve safety on rural roads that have high crash rates and do not receive other federal funds. UDOT and Horrocks Engineers are performing safety audits in rural counties to identify locations where warning signs and other enhancements would reduce the number and severity of crashes

Also, the Corridor Safety Assessments (CSAs) program examines existing state roadway corridors with histories of frequent ROR crashes to identify features that may be affecting crashes. As deficiencies in the roadway are found, Engineers identify a prioritized listing of improvement projects. UDOT then programs funding to match the needs of the improvement projects. This slightly different concept of a Federal Road Safety Audit will allow state DOTs to evaluate priority segments in a timely and cost effective manner.
Time Required: 50 minutes

37. New Signal and Detection Design Guidelines
Track: ITS / Traffic Management / Safety
Presenters: Richard Hibbard, Mark Taylor, Larry Montoya
Synopsis: This session will review the 2008 Updated Version of the Signalized Intersection Design Guidelines. The review will examine pole and head placement, striping layouts, power source and circuit design, intersection lighting, vehicle detection strategies, and state-furnished materials.
Time Required: 90 Minutes

38. How to Apply Travel Demand Models
Track: ITS / Traffic Management / Safety
Presenters: Eric Rasband
Synopsis: Each year the senior leaders from the Federal Highway Administration (FHWA), Utah Division Office, and the Utah Department of Transportation (UDOT) meet to identify areas of risk within the highway development process. In 2007 one of the areas identified was the application of travel demand models (TDM) and forecasting for use in project level analysis. Project level analysis includes systems planning, corridor or subarea planning studies, traffic operation analysis, environmental documents, and final design of projects leading to construction. To address concerns of the senior leaders, a group of transportation professionals was assembled to assist with the development of a document that outlines the application of travel demand models on project level work throughout Utah. This session will present the results this group.
Time Required: 50 Minutes

39. Tips for First Responders to Floods
Track: Maintenance
Primary Contact: Denis Stuhff
Presenters: Denis Stuhff, Jim Baird
Synopsis: A presentation geared towards Maintenance personnel. This session will explore what to look for when flooding occurs. Specifically the presentation would highlight some general instructions and tips about evaluating bridges and culverts for signs of distress and/or failure due to scour and flood effects. The Maintenance folks always have been and always will be the first responders in an emergency and this would be geared towards them, not the Engineers.
Time Required: 50 minutes

40. Grooved Pavement Markings on Moab Main Street and UDOT Pavement Marking Guide
Track: Maintenance
Primary Contact: Ken Berg/Dan Betts
Presenters: Ken Berg, Dan Betts, Vincent Liu
Synopsis: Moab's main Street from 200 N. to 300 S. has recently been reconstructed with concrete pavement. Because of seasonally high traffic and winter operations it has been a challenge to keep pavement markings at an adequate level for longer than 2 or 3 months, and because of its relatively remote location, UDOT paint crews from Price have had difficulty getting to it as often as needed. Grooved-in waterborne long line markings and preformed thermoplastic messages have shown durability through this past year and look like they'll be a cost effective alternative to higher priced durable markings. The history and intended use of UDOT's Pavement Marking Guide will also be presented.
Time required: 50 minutes

41. A UDOT Pavement Preservation Strategy for the Future
Track: Maintenance, Materials, and Construction
Primary Contact: Tracy Conti
Presenters: Tracy Conti, Tim Rose, Cory Pope, Jim McConnell, Rick Torgerson, George Lukes
Synopsis: One of the Department's Strategic Goals is "Taking Care of What We Have." UDOT currently has dedicated around $200 million to the Pavement Preservation, Rehabilitation, and Reconstruction Program. We also have a strategic goal to "Increase Capacity." Both of these strategic goals are very important to our mission. However, in the balance between capacity and preservation, capacity has clearly been given the priority by those who provide funding for the Department. Because we are likely to continue to receive funding for capacity improvements with minimal or no growth in our pavement program funding sources, in May 2008 the Department kicked off the Pavement Preservation Quality Improvement Team (QIT). This Department-wide effort was charged with redefining the emphasis, priorities, and scope of the Pavement Program, given the funding realities. The task of the Pavement Preservation QIT was to revamp UDOT's Pavement Program. The QIT completed its efforts and reported its findings to UDOT senior leadership on August 4, 2008.
This session presents those same results and recommendations. Presentations will be made by the leaders of the six sub-QITs that together developed the coordinated recommendation:
Current STIP Recommendations, led by Tracy Conti
Materials/Pavement Design, led by Rick Torgerson
Research/Innovation, led by George Lukes
Targets - Pavement Index, led by Tim Rose
Construction/Maintenance, led by Jim McConnell
Route Prioritization/Hierarchy, led by Cory Pope
Time Required: probably 90 minutes

42. Culvert Liners and Lessons Learned
Track: Maintenance
Primary Contact: Kelly Burns
Presenters: Kelly Burns, Jeff Erdman, and Jared Beard, with Ray Christensen (Modular Construction) and Russ Wosk (KWH Pipe) available for questions
Synopsis: This session will include a brief summary and update on UDOT's culvert management program. It will highlight the culvert inspection camera(s) and their role in managing UDOT's culverts. This session will summarize the different methods and benefits of rehabilitating existing culverts, including what equipment, materials and crews are necessary for installation of segmental liners. Specifically we will be discussing culvert rehabilitation utilizing slip lining, fold and form, and cured in place methods, along with our lessons learned from each rehab. The session will go through the individual steps necessary to install both a Snap Tite and a Weholite liner. It will also cover some of the lessons UDOT has learned from previous installations and tips that can help the process move along more easily. A training video is in production, and may be shown if it is ready.
Time Required: 90 minutes

43. Keeping Roads Open After Unforeseen Emergencies
Track: Maintenance
Primary Contact: Lloyd Neeley
Presenters: Dave Babcock, Nathan Merrill, Mike Ellis
Synopsis: Dave Babcock will report on Price District's response to a pothole/blowout problem on SR-10, including the use of the now famous "steel plates", and on response to pothole problems in general. Nathan Merrill will report on Cedar City District's emergency grade raise of SR-56 when it was threatened by flooding from a rising Quichapa Lake west of Cedar City in 2005. Mike Ellis will describe UDOT Structures Division's response to bridge hits.
Time Required: 50 minutes

44. Ice and Snow 101
Track: Maintenance
Primary Contact: Lynn Bernhard
Presenters: Lynn Bernhard, Curtis Sanchez, Todd Richins
Synopsis: Clearing roads in a winter snowstorm is much more involved than people might think. The operation involves a great deal of planning, extensive training, and takes advantage of advanced technologies, materials, equipment, and techniques. In this presentation, participants will learn the basics regarding Winter operations planning and operations.
Time Required: 50 minutes

45. Meeting Your Infrastructure Challenges Through the Utilization of Private Sector Service Providers
Track: Maintenance
Primary Contact: Andrea Warfield
Presenters: Andrea Warfield (VMS, Inc.), Lloyd Neeley
Synopsis: What are the challenges you face in operating and maintaining your current infrastructure? Rising maintenance costs and needs, resource availability, qualified subcontractor issues, asset management compliance, performance accountability, customer expectations? Private industry service providers are partnering these public-sector challenges through innovative, client-specific operations and maintenance programs. This session will address these programs through several case studies of successful operations and maintenance contracts currently underway in parts of the U.S., Australia and Canada.
Time Required: 50 minutes

46. Phase Leadership: Re-Defining Project Support
Track: Project Management
Presenters: Brent Schvaneveldt, Cameron Kergaye
Synopsis: Project Management is moving to a new level by re-defining project support. This session introduces the role and responsibilities of a Phase Leader. Learn about activity coordination, project continuity, and budget and schedule oversight. The duties of Phase and Activity Leaders will be described as they relate to the new design network. Project Managers, Preconstruction Engineers, Consultants and their designers will learn how to coordinate their tasks to produce quality deliverables.
Time Required: 50 minutes

47. The "New Design Network"
Track: Project Management
Presenter: Dave Adamson, H.G. Kunzler (Lochner)
Synopsis: The "New Design Network" is now out for use. This design network is the product of many hours of dedicated work from many people in and out of the UDOT. This network will be a better model for the way that the department delivers projects. This training session will be a general overview of the network. We will also discuss the logic and features of the "New Design Network".
Time Required: 50 Minutes

48. ePM Scheduling
Track: Project Management
Presenter: Tony Lau, Steven Quinn, Elaine Fanning
Synopsis: This session will cover all of the scheduling tools available in ePM. Topics include setting up networks, schedule negotiation between Project Managers and Functional Managers, management unit and individual workloads, and a thorough review of the MPS and SPS scheduler. Also discussed will be how UDOT Senior Leaders, Program Managers, etc. are measuring performance based on scheduling information in ePM. This session is for anyone who is part of the project delivery process including Project Managers, Functional Managers, Designers, etc.
Time Required: 90 minutes

49. CA4PRS: Design, Construction and Traffic Alternatives Software
Track: Project Management
Presenter: Dr. E.B. Lee
Synopsis: Construction Analysis for Pavement Rehabilitation Strategies is a decision-making tool to determine 'what if' scenarios to maximize project benefits in terms of pavement design, contracting and traffic impacts. The software provides constructability recommendations for pavement type, contracting method, construction scheduling and maintenance of traffic. Dr. Lee from the Berkeley Institute of Transportation Studies is creator of CA4PRS and is actively involved in construction/project management and transportation engineering. He has recently provided intensive CA4PRS training throughout UDOT and will present an overview of the software.
Time Required: 50 Minutes

50. Effective communication - A main ingredient to successful Project Management
Track: Project Management
Presenter: Randy Wahlen (Mountain States Concrete Pipe Association)
Synopsis: Experts estimate that successful project managers spend 75 percent of their time in verbal interaction with others. Most engineers have never had classes in communication or technical writing. This presentation will go over concepts of effective communication.
Time Required: 50 Minutes

51. Utah County I-15 Corridor Expansion Project
Track: Project Management
Presenters: Dal Hawks, John Bourne
Synopsis: The State of Utah is investing an unprecedented amount of resources into Utah County projects. During the 2008 legislative session, legislators approved a funding program that includes bonding for a $2.6 billion project to rebuild I-15 from US-6 in Spanish Fork to American Fork Main Street. The EIS for the project has been completed, and a record of decision was signed by FHWA on August 15. UDOT has moved forward to establish an I-15 CORE Team and has selected HNTB as the project management consultant firm. In this session, UDOT and HNTB will present the current status of the project, and describe the process and procedures that are being employed to deliver this large scale design-build project. A plan is in place to select a contractor in the summer of 2009, with construction beginning in spring 2010.
Time Required: 50 Minutes

52. How to set up and host an Adobe Connect Meeting
Track: Project Management
Presenter: Richard Murdock
Synopsis: Adobe Connect Pro Meeting was recently purchased by Project Development as the communication tool for Construction, Materials and Project Management training. This tool enables meetings, presentations and training to be conducted over the internet. It can be used for video conferencing, Online or distance meetings, brainstorming sessions (with use of whiteboards), and live training with recording options.
Time Required: 50 Minutes

53. On-Line Web-Based Project Management Training 'UDOT University'
Track: Project Management
Presenters: Dave Adamson, Lori Dabling
Synopsis: The Project Management Team is developing an on-line educational training course to speed the successful transition of new PM's, share tools to assist experienced PM's, and provide project team members with a common knowledge base. These courses will be available anytime, to meet your unique schedules and changing needs. Please join us to learn about the initial training modules and to discuss ideas for future curriculum and course topics.
Time Required: 50 minutes

54. Involving Local Chambers of Commerce in Public Involvement Efforts: The 3500 South Hard Hat Club & Smithfield Main Street's "Smithfield Bucks"
Track: Public Involvement
Presenters: Alan Anderson (ChamberWest CEO), Andy Neff (The Langdon Group), Chad Down (Mayor of Smithfield), Sydne Jacques (Jacques and Associates) and Christin Bott (Jacques and Associates)
Synopsis: Everyone knows construction can be tough on businesses. While UDOT continues to make great strides toward supporting merchants through projects, local chambers of commerce can prove a vital partner in seeing businesses through the wiles and woes of construction. Two examples: with UDOT's 3500 South expansion about to start up, Alan Anderson of ChamberWest decided he needed to assist UDOT's public involvement effort as the CEO of the local chamber of commerce. And the 3500 South Hard Hat Club was born, which includes coupon and other promotion assistance, a dedicated Web site and other resources for businesses dealing with construction. In a similar situation, Smithfield City's Main Street went under construction in 2007 promising major impacts to local businesses and the town's summer commerce. The president of the local chamber of commerce visited the Smithfield construction site along with a group of businesses to share mutual concerns. As a result, "Smithfield Bucks" were implemented for the main street project, and two celebrations were planned with more than 300 people in attendance at the Half Way Home event. Attend this session to learn more about both of these innovative efforts.
Time Required: 50 minutes

55. What do mayors and city staff expect from UDOT?
Track: Public Involvement
Presenters: Panel discussion with several mayors, planners, and local government representatives. Moderated by Dave Smith (Partner, Penna Powers Brian Haynes).
Synopsis: City mayors, planners and other local government staff are playing a larger role in the transportation realm than ever before. Gaining their support is critical to the success of your study or project. This 90-minute session will feature a panel discussion from several mayors, planners and local government representatives. Also, in order to get representation from all four UDOT regions, the session will also include video interviews with key local government leadership from across the state. Attendees will learn how to gain their support, how they can be an asset to your project or study, best practices in communication and public involvement efforts with city leadership, and how to make your study or project as painless as possible with support from local governments.
Time Required: 90 Minutes

56. Solutions for Effective Public Meetings
Track: Public Involvement
Presenters: Eileen Barron, Pam Murray, and Bethany Hyatt (all of Parsons Brinckerhoff)
Synopsis: Public meetings are not one-size-fits-all. Effective meetings are tailored to the needs of your project and your stakeholders. This session will provide planning tools to define your meeting purpose, the most appropriate format, what to call it, how to get people there, and how to prepare your project team. Three experienced public involvement professionals will share their planning strategies and provide examples of meeting successes and failures from NEPA, design, and construction projects.
Time Required: 50 Minutes

57. Not "Just Another PowerPoint": Tips for Making Your Next Presentation Stand Out
Track: Public Involvement
Presenters: Mike Brian (Partner, Penna Powers Brian Haynes)
Synopsis: Most people would define "live presentation" as: A terrifying situation where an individual is "put on the spot" to have other people stare at them while they attempt to communicate. It doesn't have to be that way. How do you make your presentations stand out? What are some basic presenter techniques? What are the DOs and DON'Ts in presenting? This workshop will include tips for UDOT project managers, engineers, planners, and consultants to deliver memorable presentations that will impact both internal and external audiences. Whether you make formal or informal presentations to local government officials, planning organizations, professional associations, the general public, project teams or internal UDOT groups, this workshop is for you. And don't worry - you won't have to present.
Time Required: 50 Minutes

58. What is the Public's Role in Developing Transportation Solutions?
Track: Public Involvement
Presenters: Eileen Barron (Parsons Brinckerhoff)
Synopsis: This session will provide practical guidelines and tips for determining the level of public influence on project decisions and how to dig to understand stakeholders' underlying issues. We will briefly cover public involvement regulations, but spend the majority of time focused on techniques to uncover core interests in order to work with stakeholders toward identifying viable solutions.
Time Required: 50 Minutes

59. Mountain View Corridor Public Involvement Retrospective
Track: Public Involvement
Presenters: Teri Newell (UDOT), Eileen Barron (Parsons Brinckerhoff)
Synopsis: The Mountain View Corridor (MVC) Environmental Impact Statement is approaching a Record of Decision after more than five years of technical study, agency coordination, and public outreach. This session will highlight the MVC project team's approach to public communication and coordination, including how the team addressed controversial issues, worked with project stakeholders, and built relationships that helped bring resolution to issues that enabled the project to reach this decision point.
Time Required: 50 minutes

60. Ingredients to Design-Build PI Success: Partnering, Evaluation, and Flexibility
Track: Public Involvement
Presenters: Vic Saunders (UDOT Region 1 PIM), Cyndi Keller (Parsons Brinckerhoff), Dave Asay (Frontline Communications)
Synopsis: I-15 NOW experienced great success with the public due to a strong team partnership and the ability to remain flexible and responsive in the PI Plan. Members of the I-15 NOW PI team will discuss how the PI plan changed over time, why changes were necessary, and how those changes contributed to the project's success. As UDOT undertakes a variety of design-build projects in the coming year, the I-15 NOW team will share PI lessons learned.
Time Required: 50 Minutes

61. Bicycle and Pedestrian Facilities
Track: System Planning and Programming
Presenters: Travis Jensen (Jacobs Carter Burgess)
Sharon Briggs (UDOT, Bicycle and Pedestrian Coordinator)
Synopsis: See what's new in bicycle and pedestrian planning – from the newly published bicycle and pedestrian resource guide, to prioritizing routes that create a transportation system for bicycle travel.
Time Required: 50 Minutes

62. Travel Demand Management
Track: System Planning and Programming
Presenters: Angelo Papastamos (Transportation Planning Manager)
Leone Gibson (UDOT Transit Director)
Synopsis: In its broad sense, TDM is defined as providing travelers with effective choices to improve mobility. "Managing demand in the 21st Century is about providing travelers, regardless of whether they drive alone, with travel choices, such as work location, route travel time, and mode."
Time Required: 90 Minutes

63. Passing and Climbing lane Prioritization
Track: System Planning and Programming
Presenters: Dan Kuhn (UDOT Freight Planner)
Vern Keeslar (Interplan)
Synopsis: Evaluate the needs for passing and climbing lanes on Utah's primary freight corridors (both Interstate Highways and two-lane US and State Routes), while showing how to prioritize needs in these areas using several criteria
Time Required: 50 Minutes

64. Lessons learned from building our way out of congestion
Track: System Planning and Programming
Presenters: Michael Brown (WCEC Engineers, Inc.)
Synopsis: The Wasatch Front Regional Council, MPO for the Salt Lake City area, recently utilized their travel demand model in a first-of-its-kind approach to understanding their big-picture needs. The results are getting impressive local and national attention, and they are beginning to influence the discussion on congestion pricing along with a host of other transportation policies.
Time Required: 50 Minutes

65. Innovative Intersection Design
Track: System Planning and Programming
Presenters: Michael Brown (WCEC Engineers, Inc.)
Synopsis: Continuous Flow, Parallel Flow, Town Center, Bowties, Roundabouts, Echelon and Arterial Interchanges – these are promising new designs for urban intersections that are context sensitive, incredibly efficient, and often surprisingly affordable especially if such a design is envisioned when adjacent land uses are first established. Compared to a freeway interchange, they can sometimes perform at 70% or higher, and cost only 30% or less.
Time Required: 50 Minutes

66. Planning document in a controversial environment
Track: System Planning and Programming
Presenters: Maria Vyas (Fehr & Peers)
Catherine Cutler (UDOT Environmental)
Synopsis: Basically we worked on a trail project down in Springdale, helping them evaluate some trail alignments along the Virgin River, and had this handful of reluctant property owners to contend with, so everything we did practically had to be bulletproof. Wasn't even an environmental document, just a feasibility study, but with the level of dissent we had to cover our bases.
Time Required: 50 Minutes

67. Think Green, Think Concrete
Track: Materials
Presenters: Todd Laker, Holcim
Synopsis: "As the construction industry is becoming more and more "Green" it is important to understand how cement and concrete can also be environmentally friendly and sustainable. The Concrete industry has sustainable initiatives that are greatly affected by specifications, however blended cements and performance concretes are gaining acceptance. These products help cut CO2 emissions, lower energy consumption and are engineered to perform equal to conventional concretes. This presentation will explore sustainable options and solutions in the cement and concrete industry."
Time Required: 50 minutes

68. UDOT's Commitment to Recycling Existing Pavement Materials
Track: Materials
Presenters: George Lukes
Synopsis: "A summary of all the recycling that we do, how we select options, incentives (if any), performance, etc.".
Time Required: 50 minutes

69. What does your pavement truly cost?
Track: Materials
Presenters: Ron Youngman (CO/WY ACPA), Mitzi McIntyre
Synopsis: Addresses life cycle cost...of concrete vs Asphalt
Time Required: 50 minutes

70. Sustainability through People Process and Product Innovation
Track: Materials
Presenters: Jean-Claude Roumain, Product Manager – Holcim, Todd Laker
Synopsis : "Building an infrastructure to support our desired standard of living, while insuring the protection of our environment, and the efficient use of our non renewable natural resources". We will demonstrate the effective use of byproducts from industry to improve the performance and cost effectiveness of cement and concrete manufacturing and applications. In addition I will show the evolution of new technology and potential disruptive Product Innovations.
Time Required: 90 minutes

71. Steel Inspections….**Who are those guys?**
Track: Materials
Presenters: Jeremy Price, Nick Romero, Wade Laycock
Synopsis: UDOT Central Materials Structural Steel Inspectors provide a wealth of knowledge and offer expert support for the Regions. The inspectors are certified experts in Shop Fabrication (Bridges, and over head sign Structures), Structural Fasteners, field painting of bridge coatings, and field welding. This session is an introduction to the inspectors and how to utilize them for inspection support and opinion.
Time Required: 90 minutes

72. UDOT Materials Database – Update & Progress
Track: Materials
Presenters: George Lukes
Synopsis: Central Materials has continued its development of a web-based Materials Database. The direction of the application changed slightly to be developed in APEX rather than Java. Since October 2007, the following modules have come online and have been developed in APEX (or the Java application has been converted to APEX): binder, concrete, HMA mix design verification letter, cementitious materials, paint, structural coatings, equipment and project accounting (T66 reporting). It is expected that qualified suppliers, untreated base course, aggregate, TTQP/QA/IA and field verification testing will be developed and added prior to the '09 construction season. In addition, contractor and supplier access is expected to become available. This session will summarize where the database has been, where it is now and where it is going. Further, some short demonstrations of its capabilities will be shown.
Time Required: 50 minutes

73. Validity of Concrete Testing – The Sequel
Track: Materials
Presenters: Ben Blakenship
Synopsis: The concrete test fest has been conducted several times now. This is a review of the latest data and an open discussion of how to utilize the data and make it meaningful to participants.
Time Required: 50 minutes

74. Superpave Fundamentals
Track: (Materials).
Presenter: Pedro Romero - U of U
Synopsis: Provides a historical perspective on SuperPave and discusses the following topics: Aggregates, Gradation, SuperPave Gyratory Compactor (SGC), Design ESALS, Ndes, Nmax, Voids, VMA, VFA, Dust to Binder Ratio and Determination of Binder Content. Provides a perspective on mix performance testing as envisioned by the SuperPave method as well as recent developments.
Time Required: 90 minutes

75. All Employee Survey Experiences
Track: Leadership/Organizational Issues
Presenters: Walter "Butch" Waidelich, FHWA - Utah Division
Synopsis: The Federal Highway Administration (FHWA) has administered an "All Employee Survey" every year since 1995. Butch Waidelich has been a member of the FHWA Committee that is responsible for this survey since 2005, and is currently the Co-Chair of the Committee. This session is intended to cover why an employee survey is conducted, what are the logistics and organization behind it, what have been the benefits of the survey, and what lessons have been learned. The session is intended to learn how to get honest and candid feedback from employees, and then to use that feedback for continuous improvement activities.
Time Required: 50 minutes

76. Performance Measures - Where are we at?
Track: Leadership/Organizational Issues
Presenters: Jim McMinimee
Synopsis: A review of UDOT's dashboard which consists of performance indicators/measures that assist executives in assessing the health of the Federal-Aid Highway Program (FAHP). The performance indicators/measures enable the FHWA and the UDOT to monitor program performance and proactively implement corrective actions when needed.
Time Required: 50 minutes

77. UDOT Mentoring Program
Track: Leadership/Organizational Issues
Presenters: Randy Park
Synopsis: Within the next ten years, all of Senior Leadership and many other leaders will be eligible for retirement. This session will explain the goals of the program, discuss mentoring and coaching principles and lay out a framework for those in either mentoring employees or those looking to be mentored by those they respect. Concepts such as succession planning, increased productivity, reduced turnover and information sharing will be discussed in detail.
Time Required: 50 minutes

78. Preparing for a leadership/management Role
Track: Leadership/Organizational Issues
Presenters: Nathan Lee & Cory Pope
Synopsis: Tips about leadership and preparing for future opportunities. Insights into leadership roles and responsibilities. What we wish we would have known before reaching leadership positions. The power of mentors.
Time Required: 50 minutes

79. High School Student Session
Track: Leadership/Organizational Issues
Presenters: Rick Murdock
Synopsis: A UDOT-sponsored informational session for High School Student attendees.
Time Required: 90 minutes

80. University Student Session
Track: Leadership/Organizational Issues
Presenters: Rick Murdock
Synopsis: A UDOT-sponsored informational session for University Student attendees.
Time Required: 50 minutes